

## A STUDY ON AWARENESS OF ORGAN DONATION AND TRANSPLANTATION OF KIDNEY PATIENTS IN CHENNAI CITY

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### **ABSTRACT**

*In India, the probable number of deaths due to chronic disease is about 5.21 million in 2008 and is predictable to climb to 7.63 million in 2020 (66.7 per cent of all deaths). The number of organ donations is much lower in the country compared to other nations. Indians need awareness on organ donation. Nearly 140,000 brain dead cases are reported due to road accidents, out of which 80,000 can be potential organ donors. But only a few organ donations are happening. If 20 per cent of families whose member had a brain death donate his or her organs, all requirements for organ transplantation in this country would be fulfilled.*

**KEYWORDS:** *Kidney Disease, Awareness, Organ Donation and Transplantation*

### **INTRODUCTION**

**Renal Care India Statistics (2015)** recent research suggests that 1 in 10 of the population may have CKD, but is less common in young adults, being present in 1 in 50 people. In those ages over 75 years, CKD is present in 1 out of 2 people. However, many elderly people with CKD may not have diseased kidneys but have normal ageing of their kidneys. Even though severe kidney failure will not occur with normal ageing of the kidneys, there is an increased chance of high blood pressure and heart disease or stroke, so that medical checks will be helpful. Renal statistics, especially the rise in the number of CKD and renal failure cases in India has taken an aloft surge.

Tamil Nadu was the first ever state to start a cadaver transplantation programme and it became an inspiration to the other states of India to start such programmes. In case of cadaver transplantation, Tamil Nadu and Andhra Pradesh were in forefront. The NGOs have been doing a great job not just in promoting awareness of organ donation but have been instrumental in initiating policy change by the government and in aiding the government in organizing a regional network. NGOs, in partnership with the governments, have been successfully promoting and helping to implement the deceased donor programme. The FORTE (Foundation for Organ Transplantation and Education)-Bangalore, MOHAN (Multi Organ Harvesting Aid Network)- Chennai and Hyderabad, Narmada Kidney Foundation, ZTCC (Zonal Transplant Coordinating Committee)-Mumbai, (ORBO) Organ Retrieval Banking Organization-New Delhi, DONATE (Delhi Organ Procurement Network and Transplant Education) – Delhi are some of the active groups. The problem of Kidney Disease is most likely taken too lightly and under-recognized in India. The burden of Kidney Disease is increasing in India rapidly. India lacks trained manpower, facilities and economic expertise to ensure universal availability.

There is an urgent need to initiate a wide-ranging and efficient early detection and prevention program to reduce the burden of kidney disease in India. Awareness towards the kidney patients regarding organ donation and transplantation should give to make them protect from the deadliest disease before it comes to the last stage.

## OBJECTIVES OF THE STUDY

- To identify the awareness level of organ donation and transplantation among the kidney patients in the study area.
- To find out the impact of kidney treatment among kidney patients

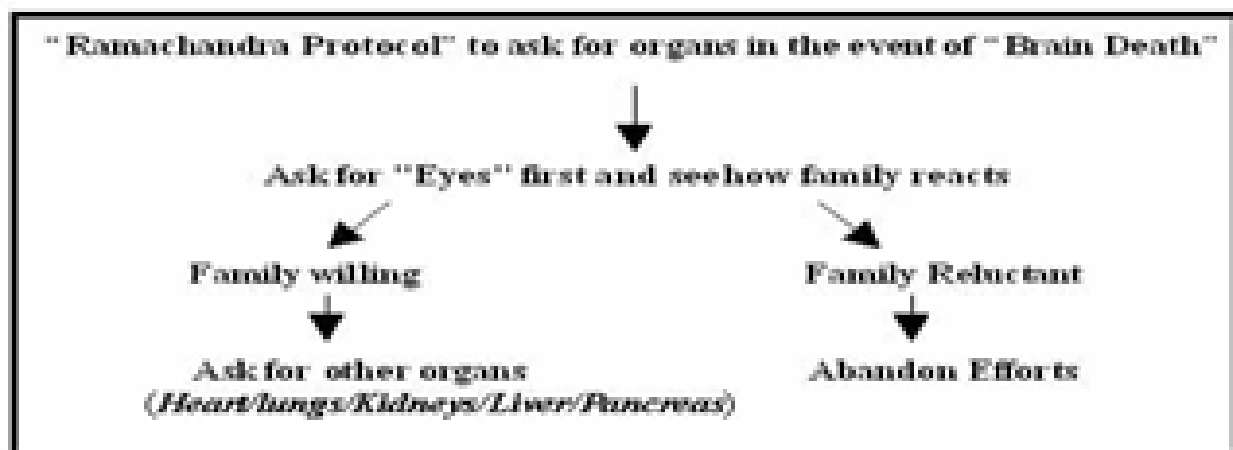
## HYPOTHESES OF THE STUDY

There is no association between a number of years of treatment and awareness of organ donation and transplantation of kidney patients.

## METHODOLOGY

Both primary data and secondary data have used. A total of 550 samples were drawn randomly from the selected areas of Chennai city suffering from Kidney ailment patients. The researcher adopted convenient and purposive sampling method and most of the interviews were conducted to both inpatients and outpatients.

### Allocation Model of Organs: Ramachandra Protocol' to Ask for Organs in Tamil Nadu



**Figure 1**

Source: Mohan Foundation

The Tamil Nadu model has been possible due to the coming together of both government and private hospitals, NGOs and the State Health Department. Tamil Nadu model of deceased donor transplantation was realized and a transplant coordinator is appointed and is available round the clock to coordinate all aspects of transplantation in the hospitals. The hospitals are required to upload the details of the transplantation on the hospital website and the government website. Each hospital maintains a waiting list of patients awaiting transplantation that is frequently updated. In the absence of an organ sharing network, The Tamil Nadu model involves allocation of one kidney, liver, and heart automatically to the hospital where the deceased donor organs are harvested. The second kidney, the liver, and the heart (if the hospital where harvesting has taken place only does renal transplantation) will be allocated to patients in other hospitals by the convener.

**Table 1: Organization Helping with Organ Donation and Transplantation Programmes in India**

Organization	State
MOHAN Foundation	Tamil Nadu, Andhra Pradesh, Maharastra
FORTE	Bangalore
ZTCC	Mumbai
ORBO	New Delhi
SORT	Cochin

Source: Secondary Data

**Table 2: Tamil Nadu Yearly Transplant Data**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Donors	7	59	87	70	83	131	136	155	185	160	1073
Heart	1	15	13	8	15	16	41	65	100	97	371
Lung	0	0	4	1	8	20	15	36	56	87	227
Liver	6	48	82	64	80	118	128	152	179	144	1001
Kidneys	14	117	154	129	149	234	227	292	339	286	1941
Heart Valves	2	58	118	98	74	102	102	82	76	27	739
Corneas	4	74	156	98	150	180	196	246	279	249	1632
Skin	1	0	0	0	0	0	12	14	26	32	85
<b>Total organs &amp; tissues</b>	<b>28</b>	<b>312</b>	<b>527</b>	<b>398</b>	<b>476</b>	<b>670</b>	<b>726</b>	<b>890</b>	<b>1065</b>	<b>943</b>	<b>6035</b>

Source: Tamil Nadu National Organ Network Sharing, 2018

Table 2 shows the major organ transplant data of Tamil Nadu for different organs from 2008 to 2017. It shows that there is a continuous increase of donors for the entire major organ in Tamil Nadu. Among this kidney is in the top and eye donation leads second. As there is an option for live donors for kidney within the family and relatives making it top in Tamil Nadu compare to other organs. More number of awareness programme on this major organ leads to a gradual increasing trend.

### Null hypothesis

There is no association between the number of years of treatment and awareness of organ donation and transplantation of kidney patients.

**Table 3: Chi-Square Test for Association between Number of Years of Treatment and Aware of Organ Donation and Transplantation of Kidney Patients**

Number of Years on the Treatment	Aware of Organ Donation and Transplantation		Total	Chi-Square Value	P Value
	Yes	No			
Below 1	251 (97.7) [46.9]	6 (2.3) [40.0]	257	7.509	0.057
1-2	118 (98.3) [22.1]	2 (1.7) [13.3]	120		

2-3	79 (92.9) [14.8]	6 (7.1) [40.0]	85		
Above 3	87 (98.9) [16.3]	1 (1.1) [6.7]	88		
<b>Total</b>	<b>535</b>	<b>15</b>	<b>550</b>		

**Source:** Primary Data

**Note:** 1 the value within ( ) refers to Row percentage

2. The value within [ ] refers to Column percentage

From table 3, it is observed that the Chi-square statistic is 7.509. Since P-value is greater than 0.05, the null hypothesis is accepted at 5 percent level of significance. Hence, it is concluded that there is no association between a number of years of treatment and awareness of organ donation and transplantation of kidney patients. Based on the row percentage, of the number of years of treatment of below 1, 97.7% of patients are aware and 2.3% are not aware. The years of treatment 1-2, 98.3% are aware and 1.7% is not aware. The number of years of treatment 2-3, 92.9% is aware and 7.1% are not aware. The number of years of treatment above 3, 98.9% are aware and 1.1% are not aware. Thus, compared to all the patients it is found that awareness towards organ donation and transplantation is same below 1 to above 3. Today more awareness program has been come through media and other sources. Therefore, it is statistically proved that there exists no significant relationship between a number of years of treatment and awareness of organ donation and transplantation of kidney patients.

## CONCLUSIONS

It is the time to make aware to a large number of the society as to take extra precaution and preventive measures and as to help the person who is indeed in need of organs to lead a normal life like us. Kidney transplantation is superior to dialysis in terms of survival, quality of life and cost of therapy, and permits thousands of people with end-stage organ failure to enjoy a relatively normal life. It is the most viable long-term renal replacement option in large parts of the developing world including India. An overwhelming majority of kidneys come from living donors, as the deceased donor programme is still in infancy and faces multiple barriers. There is a lack of supply of organs and the very high cost of treatment especially for the middle-class section and low-class section of the population. The deceased organ donation rates in India which vary in different parts have been estimated to be 0.08 per million populations per year. It has been suggested that sustained industrial growth, infrastructure support and higher rates of literacy in the southern and western regions of India are supportive to the growth of deceased donor programmers. Awareness programmers, personal beliefs and experiences of prior contact influence individual and societal attitudes and awareness regarding organ donation. In India, consent of the next of kin is mandatory before organs can be recovered from a deceased donor.

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